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TELEGRAMPAGE 01 OF 03 AIT TA 05270 00 OF 04 120723Z
ACTION OCS-09

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INFO TC-01 EP-02 P-01 RA-01 UN-01 PAU-01 X-01 /B06 A3 COK
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CIAE-00 EB-00 DINT-05 DODE-00 H-01 10-19 NSCE-00
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R 120632Z AUG 87
FM AIT TAIPEI
TO AIT WASHDC
INFO AMEMBASSY BEIJING
AMEMBASSY TOKYO
AMEMBASSY BANGKOK
AMEMBASSY MANILA
AMCONSUL SHANGHAI
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UNCLAS TAIPEI 05270

FOR AIT/W PASS USDOC, USDOJ, NS, EPA, FBI,
STATE FOR EAP/C, EAP/RA/TC, OES/SEC, DES, INR, SS, TS,
AND BURKART, EAP/M FOR GOSNELL
USDOC FOR DAS SEARLES; ITA/IEP/EAP
IEP/EAP/OPB/4430/JHARDEE; 3318/IS
NBS;
INTERIOR FOR DAS SMITH
NSF FOR DR. BORIGHT
EPA FOR DR. JUTRO
TOKYO FOR SET AND NSF

E.O. 12356: N/A

TAGS: SENV, HSCA, BEXP, TV

SUBJECT: TAIWAN'S ENVIRONMENTAL
REPORT* DETAILS ENVIRONMENTAL WOES

REF: TAIPEI 3718 (NOTAL)

1. BEGIN SUMMARY. A DRAFT "TAIWAN 2000 REPORT" WAS DISCUSSED AT A RECENT CONFERENCE IN TAIPEI. THE DRAFT CATALOGUES ENVIRONMENTAL DEGRADATION RESULTING FROM TAIWAN'S RAPID INDUSTRIALIZATION AND PROVIDES RECOMMENDATIONS FOR ACTION. A DUTCH CITIZEN WITH CLOSE TIES TO TAIWAN INITIATED THE IDEA FOR THE STUDY. THE ASIA FOUNDATION AND TAIWAN'S COUNCIL FOR ECONOMIC PLANNING AND DEVELOPMENT ARE FINDING THE STUDY WHICH WILL ATTEMPT TO INTEGRATE MARKET FACTORS INTO TAIWAN'S LONG-RANGE ECONOMIC PLANNING. NATIONAL TAIWAN UNIVERSITY'S DR. CHANG YI-CHANG HEADS AN INTERDISCIPLINARY COMMITTEE OVERSEEING THE STUDY.

2. ACCORDING TO THE DRAFT REPORT, LACK OF POLLUTION CONTROLS HAS RESULTED IN TAIWAN DEVELOPING A COMPARATIVE ADVANTAGE IN "DIRTY" INDUSTRIES. CONFIDENCE IN THE ABILITIES OF THE AUTHORITIES TO MANAGE ENVIRONMENTAL AFFAIRS HAS ERODED DRAMATICALLY. THE ISLAND HAS SERIOUS PROBLEMS WITH EVERY CATEGORY OF POLLUTANT. MOST SOLID WASTE IS DISPOSED OF AT 300 OPEN DUMPING SITES. TAIWAN LACKS A MEANS TO TRACK AND ASSURE THE SAFE DISPOSAL OF HAZARDOUS SUBSTANCES. AIR QUALITY IN MAJOR CITIES IS POOR. TWENTY PERCENT OF TAIWAN'S RIVERS AND STREAMS DO NOT MEET WATER QUALITY STANDARDS. GROUND WATER SUPPLIES HAVE BECOME INCREASINGLY POLLUTED. LACK OF A DATA BASE HINDERS THE ABILITY TO ANALYZE THE EFFECT OF ENVIRONMENTAL DEGRADATION ON ANIMALS NATIVE TO TAIWAN. COUNCIL FOR ECONOMIC PLANNING AND DEVELOPMENT GMP

PROJECTIONS INDICATING A 6.5 PERCENT ANNUAL GROWTH RATE ARE OVERLY OPTIMISTIC. THE STUDY RECOMMENDS COMPREHENSIVE EDUCATION, MANAGEMENT, AND APPROACHES THAT INCORPORATE THE ENVIRONMENT INTO ECONOMIC PLANNING. EVEN IF TAIWAN'S STRAIGHT COMPREHENSIVE ENVIRONMENTAL LAWS WERE ADEQUATELY ENFORCED, PROBLEMS WILL CONTINUE. AUTHORITIES HAVE RECENTLY ANNOUNCED THAT TAIWAN'S BUREAU OF ENVIRONMENTAL PROTECTION WILL BE UPGRADED TO CABINET-LEVEL STATUS ON AUGUST 22. CHIEN YU-HSIN, A 41-YEAR-OLD AERONAUTICAL ENGINEER, WILL HEAD THE NEW DEPARTMENT. COMMENT PROVIDED. END SUMMARY.

3. ENVIRONMENTAL POLLUTION IS THE FOCUS OF A DRAFT "TAIWAN 2000 REPORT" DISCUSSED AT A CONFERENCE IN TAIPEI ON JULY 28. THE DRAFT REPORT IS AN INTERIM RESULT OF A STUDY FUNDED BY THE ASIA FOUNDATION AND TAIWAN'S COUNCIL FOR ECONOMIC PLANNING AND DEVELOPMENT (CEPD). A FINAL REPORT WILL BE RELEASED NEXT SPRING. THE DRAFT, WHICH IS NOT FOR QUOTATION, CATALOGUES ENVIRONMENTAL DEGRADATION RESULTING FROM TAIWAN'S RAPID INDUSTRIALIZATION.

4. THE IMPETUS FOR THE TAIWAN 2000 STUDY CAME FROM ALLERD STIKKER, A DUTCH CITIZEN WITH CLOSE BUSINESS TIES TO TAIWAN. STIKKER COLLABORATED WITH DR. GERALD O. BARNEY, WHOSE U.S. FIRM, GLOBAL STUDIES CENTER, PROVIDED MATHEMATICAL MODELS FOR THE STUDY. THE MODELS ATTEMPT TO INTEGRATE ENVIRONMENTAL AND OTHER NON-MARKET FACTORS INTO TAIWAN'S LONG-RANGE PLANNING. TWO SCENARIOS ARE PROJECTED. THE FIRST USES A REACTIVE COMPONENT THAT ASSUMES DEFENSIVE RESPONSES TO ENVIRONMENTAL PROBLEMS AS THEY OCCUR. THE SECOND IS ANTICIPATORY. IT ASSUMES ENVIRONMENTAL FACTORS ARE INCLUDED IN LONG-TERM ECONOMIC PLANNING. DR. CHANG YI-CHANG, A BIOGEOGRAPHER AT NATIONAL TAIWAN UNIVERSITY, HEADS AN INTERDISCIPLINARY STEERING COMMITTEE CONSISTING PRIMARILY OF SCHOLARS FROM TAIWAN'S ACADEMIA SINICA (ZHONGYANG YANJIU YU'AN).

HIGHLIGHTS OF THE DRAFT REPORT - THE PROBLEMS

5. TAIWAN HAS SERIOUS PROBLEMS WITH VIRTUALLY EVERY CATEGORY OF POLLUTANT. THESE INCLUDE BIODEGRADABLE SUBSTANCES (FOOD WASTES, PAPER, FERTILIZER, EXCREMENT, CARCASSES); INERT AND SEMI-INERT SUBSTANCES (PLASTICS, GLASS, AND METAL); HAZARDOUS POLLUTANTS (CAUSTIC CHEMICALS, PESTICIDES, RADIOACTIVE WASTES, HEAVY METALS); ATMOSPHERIC EMISSIONS (CARBON MONOXIDE, HYDROCARBONS, NITROGEN AND SULPHUR OXIDES), AND NOISE. ACCORDING TO THE REPORT, THERE ARE 62,474 FACTORIES IN TAIWAN; A 10-FOLD INCREASE SINCE 1950. GROWTH RATES HAVE BEEN HIGHEST FOR INDUSTRIES KNOWN FOR PRODUCTION OF HAZARDOUS WASTE BYPRODUCTS. THOSE INDUSTRIES INCLUDE PLASTICS, PETROLEUM REFINING, PESTICIDES, LEATHER TANNING, AND CHEMICALS. LACK OF POLLUTION CONTROLS HAS RESULTED IN TAIWAN DEVELOPING A COMPETITIVE ADVANTAGE IN "DIRTY" INDUSTRIES. AUTHORITIES HAVE NO KNOWLEDGE OF THE LOCATION OF HAZARDOUS WASTES; NO CAPABILITY TO ASSURE THEIR SAFE HANDLING AND DISPOSAL AND NO PLANS FOR MANAGEMENT OF ACCIDENTAL SPILLS.

6. TAIWAN RESIDENTS ARE EXTREMELY PESSIMISTIC ABOUT THE ENVIRONMENT. CONFIDENCE IN THE ABILITY OF AUTHORITIES TO MANAGE ENVIRONMENTAL AFFAIRS HAS ERODED DRAMATICALLY. A CONSENSUS APPROACH IS LACKING. EVEN WITH A CONSENSUS, THE DRAFT STUDY NOTES, ANALYTICAL CAPABILITIES AND INSTITUTIONAL STRUCTURES ARE WHOLLY INADEQUATE FOR MAKING DECISIONS INVOLVING INTERRELATED PROBLEMS OF ENVIRONMENTAL MANAGEMENT.

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7. SOLID WASTES: LESS THAN 1 PERCENT OF HUMAN WASTE IN TAIWAN RECEIVES PRIMARY SEWAGE TREATMENT. IN TAIPEI THE FIGURE IS 3 PERCENT. TWO PERCENT OF TAIWAN'S 19.5 MILLION PEOPLE RECEIVES SEWER SERVICE. IN TAIPEI, 11 PERCENT OF HOUSEHOLDS ARE CONNECTED TO CITY SEWERS. THE AVERAGE GENERATION OF GARBAGE PER CAPITA IN TAIWAN INCREASED FROM .5 TO .74 KILOGRAMS PER DAY - ABOUT 4 PERCENT PER ANNUM; THE SAME RATE AS INCOME PER CAPITA. TAIWAN'S SIX MILLION PIGS GENERATE WASTES EQUIVALENT TO 36 MILLION PEOPLE. MORE THAN THREE-QUARTERS OF THE AVERAGE 13,000 TONS PER DAY OF HOUSEHOLD GARBAGE IN TAIWAN IS DISPOSED OF IN OPEN LANDFILLS. SOLID WASTES GENERATED FROM INDUSTRY ARE ESTIMATED TO BE 80,000 PER DAY. TAIWAN HAS 300 OPEN DUMPING SITES, 30 PERCENT OF WHICH ARE LOCATED ALONG RIVER BANKS NEAR CITIES INCINERATION HAS SO FAR PROVEN TECHNICALLY UNSATISFACTORY AND COSTLY.

8. HAZARDOUS WASTES: TAIWAN LACKS THE PHYSICAL AND INSTITUTIONAL MEANS TO ASSURE SAFE DISPOSAL OF HAZARDOUS WASTES. THOSE SUBSTANCES INCLUDE HEAVY METALS SUCH AS CADMIUM AND CHROME, PESTICIDES, PCB'S, DIOXINS, AND ORGANIC SOLVENTS. THERE IS UNCERTAINTY AS TO THE QUANTITY OF HAZARDOUS WASTES PRODUCED AND THE METHOD AND LOCATION OF DISPOSAL. TESTING IS INADEQUATE BECAUSE OF THE VARIETY OF HAZARDOUS SUBSTANCES INVOLVED AND THE DIFFICULTY IN MEASURING THE MOST LETHAL OF THE SUBSTANCES.

9. AIR POLLUTION: THE QUALITY OF AIR IN TAIWAN'S MAJOR CITIES -- TAIPEI, TAICHUNG, TAINAN AND KAOSIUNG -- IS POOR. THE MAJOR SOURCES OF AIR POLLUTION INCLUDE THE ISLAND'S 8.3 MILLION REGISTERED MOTOR VEHICLES, 80 PERCENT OF WHICH ARE MOTORCYCLES AND MOTOR SCOOTERS. TAIWAN'S STEEL, CEMENT, AND POWER INDUSTRIES ARE MAJOR CONTRIBUTORS TO AIR POLLUTION.

10. WATER POLLUTION: TAIWAN HAS SOME 2000 KILOMETERS OF

RIVERS AND STREAMS; 20 PERCENT OF WHICH DO NOT MEET WATER QUALITY STANDARDS. THE MOST POLLUTED RIVERS AND STREAMS PASS THROUGH TAIWAN'S TWO LARGEST CITIES - TAIPEI AND KAOSIUNG. GROUNDWATER, WHICH ACCOUNTS FOR SOME 24 PERCENT OF TAIWAN'S WATER SUPPLY, IS POLLUTED IN MANY REGIONS. AS A RESULT, LESS THAN 15 PERCENT OF GROUNDWATER IS NOW USED FOR DRINKING. MOST OF THE WASTE WATER DISCHARGES FROM INDUSTRY DO NOT MEET EFFLUENT DISCHARGE LIMITATIONS.

11. NATURAL RESOURCES: THE YEAR 2000 STUDY INDICATES THAT TAIWAN HAS FEW NATURAL RESOURCES REMAINING IN THEIR NATURAL STATE. MANY SPECIES OF ANIMALS ARE THREATENED BY HABITAT DESTRUCTION, DISTURBANCE, EXPLOITATION, AND COMPETITION. THE LACK OF SOLID DATA ON ANIMALS NATIVE TO TAIWAN PRECLUDES STATEMENTS REGARDING WHAT SPECIES HAVE BECOME EXTINCT, WHAT SPECIES ARE ENDANGERED, AND WHAT IS REQUIRED TO PROTECT THE SPECIES REMAINING.

IMPLICATIONS FOR ECONOMIC GROWTH

12. ECONOMIC GROWTH TARGETS: TAIWAN'S COUNCIL FOR ECONOMIC PLANNING AND DEVELOPMENT (CEPD) PROJECTS AN AVERAGE 6.5 PERCENT ANNUAL GROWTH RATE IN GNP THROUGH THE YEAR 2000. THE DRAFT STUDY CHALLENGES THOSE PROJECTIONS. IT DOES NOT, HOWEVER, PROVIDE A REVISED

ESTIMATED GROWTH RATE. ACCORDING TO THE 2000 STUDY THE CEPD PROJECTIONS FAIL TO TAKE INTO ACCOUNT THE NEGATIVE EFFECTS OF CONTINUED DEGRADATION OF THE ENVIRONMENT. IT POSTULATES THAT RISING INCOMES WILL BE UNABLE TO COMPENSATE FOR DECLINING ENVIRONMENTAL QUALITY AND A DECLINING QUALITY OF LIFE. THE DRAFT NOTES THAT PRODUCTION OF WASTE BY-PRODUCTS INCREASES AT ROUGHLY THE SAME RATE AS GNP. IF TAIWAN ACHIEVED THE CEPD-PROJECTED GROWTH RATE, IT WOULD ALSO EXPECT A 2.5-FOLD INCREASE IN THE RATES OF POLLUTION GENERATION.

DRAFT CONCLUSIONS

13. AMONG RECOMMENDATIONS THE DRAFT REPORT MAKES ARE:

--CONSIDERING ALTERNATIVE DEVELOPMENT STRATEGIES GIVING GREATER WEIGHT TO CLEAN SERVICES AND INDUSTRIES;

--FORGING A SOCIAL CONSENSUS THAT VIEWS ENVIRONMENTAL QUALITY AS AN ESSENTIAL COMPONENT OF THE QUALITY OF LIFE;

--INCORPORATING ENVIRONMENTAL AND NATURAL RESOURCE STUDIES INTO SCHOOL CURRICULA AND PROVIDE COVERAGE OF ENVIRONMENTAL AND RESOURCE ISSUES ON TELEVISION AND OTHER MASS MEDIA;

--INSTITUTIONALIZING A FRAMEWORK FOR INTEGRATED AND COMPREHENSIVE MANAGEMENT OF THE ECOLOGY OF TAIWAN;

--BEGINNING PLANNING FOR A SYSTEM OF COMPLETE DESTRUCTION OF HAZARDOUS ORGANIC WASTES AND STABLE, PERMANENT DISPOSAL OF INORGANICS (HEAVY METALS AND RADIOACTIVE WASTES)

--IMPLEMENTING A SYSTEM FOR OPERATING MOTORCYCLES AND SCOOTERS BASED ON EXHAUST EMISSIONS; AND

--UPDATING AND EXPANDING POLLUTION MONITORING EQUIPMENT AND STANDARDIZE PROCEDURES.

EXISTING LEGISLATION

14. SIX COMPREHENSIVE LAWS ALREADY IN FORCE COVER AIR, WATER, AND NOISE POLLUTION; SOLID WASTE DISPOSAL, DRINKING WATER MANAGEMENT, AND CONTROL OF TOXIC CHEMICAL SUBSTANCES. ENFORCEMENT IS IN MANY CASES LAX, HOWEVER. EVEN IF EXISTING ENVIRONMENTAL LEGISLATION IS FULLY IMPLEMENTED, PROBLEMS OF LEACHING AND WASHING OF GARBAGE, FERTILIZER, PESTICIDES AND HAZARDOUS SUBSTANCES INTO RIVER SYSTEMS WILL LIKELY GET WORSE. SEVERAL ENVIRONMENTAL IMPROVEMENT PROJECTS HAVE BEEN BUDGETED (REFTEL DISCUSSES COMMERCIAL OPPORTUNITIES FOR U.S. FIRMS IN THE AREA OF ENVIRONMENTAL PROTECTION).

A CABINET-LEVEL DEPARTMENT OF ENVIRONMENTAL PROTECTION

15. IN RESPONSE TO THE GROWING IMPORTANCE OF ENVIRONMENTAL ISSUES, TAIWAN'S EXECUTIVE YUAN ANNOUNCED IN APRIL THAT THE BUREAU OF ENVIRONMENTAL PROTECTION (HUAN BAO JU), WHICH IS CURRENTLY UNDER THE DEPARTMENT OF HEALTH, WOULD BE RAISED TO CABINET-LEVEL STATUS. THE NEW DEPARTMENT OF ENVIRONMENTAL PROTECTION (HUAN BAO SHU) WILL BEGIN OPERATING ON AUGUST 22 AND WILL REPORT DIRECTLY TO THE EXECUTIVE YUAN. EUGENE YU-HSIN CHIEN, A 41-YEAR-OLD AERONAUTICAL ENGINEER WHO RECEIVED HIS

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PH.D. FROM NEW YORK UNIVERSITY, WILL HEAD THE NEW
DEPARTMENT.

16. COMMENT: PUBLIC AWARENESS OF ENVIRONMENTAL
POLLUTION IN TAIWAN HAS INCREASED DRAMATICALLY IN RECENT
YEARS. RELATIVE AFFLUENCE AND A HIGH LEVEL OF EDUCATION
HAS RAISED EXPECTATIONS. THE 1986 PROTEST AGAINST
DUPONT CHEMICAL COMPANY'S PLAN TO CONSTRUCT A TITANIUM
DIOXIDE PLANT IN LUKANG IS ONE EXAMPLE OF THE PUBLIC'S
INCREASED INVOLVEMENT AND INFLUENCE. JUST THIS WEEK,
TAIWAN'S ACADEMIA SINICA RELEASED A REPORT WARNING OF
THE ECOLOGICAL DAMAGE THAT WOULD RESULT FROM THE
CONSTRUCTION OF A FOURTH NUCLEAR POWER PLANT ON TAIWAN.
THE ELEVATION OF THE DEPARTMENT OF ENVIRONMENTAL
PROTECTION IS A MEASURED BUT IMPORTANT STEP THAT SIGNALS
THE NEED FOR COORDINATED ACTION IN ENVIRONMENTAL
AFFAIRS. THE DRAFT TAIWAN 2000 REPORT PROVIDES A
SOBERING ASSESSMENT OF TAIWAN'S ENVIRONMENT AFTER NEARLY
THREE DECADES OF DYNAMIC ECONOMIC GROWTH. DEAN

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FOIA/PA/EO CASE CHECKLIST

_____ All exemptions cited on the documents are explained in the R/D letter.

_____ All documents are stamped, and stamp cites all exemptions invoked for the documents. Documents are stamped on the front of the page, never on the back.

_____ The document totals referred to in the R/D letter all tally.

_____ The markings on the documents (R, D, E . . .) are consistent with the reviewer's worksheet.

_____ All information to be excised is bracketed in red (with the exception of those mandatory requests which are being forwarded to the NSC--these are bracketed in pencil), and all extraneous markings have been erased.

_____ The determination of each document has been entered on the reviewer's worksheet document list. This includes all not relevant documents (NR) and all referrals, including the agency to which they were referred and whether the referral is for concurrence or transference for direct reply.

_____ If an upgrading memo is required, it should be signed, dated and included in the package. The upgraded documents should be appropriately marked and signed by the signing officer.

_____ All Top Secret Cover sheets are signed on back. Downgrade or declassification actions are indicated, dated and new classification provided in appropriate section of the cover sheet.

_____ All duplicate documents are included in the Not Relevant package. (This package should not be re-reviewed for release.)

_____ Copies of referral memos for direct response have been provided for the case file. Copies of referral memos for concurrence will be provided by Mr. Leahy.

_____ A blue flimsy is provided for the files, along with two white flimsy copies, one for FAIM and the other to be dated and returned to CDC.

_____ Copies of R/D letters should be provided for Presidential libraries and other agencies where necessary.

Completed by: _____ Request No. _____

Date: _____